

IN THE CLAIMS:

Please amend claims 1-5, 7-10, 15 and 20-22, cancel claims 6, 16, 17, 19 and 23 without prejudice or disclaimer, and add new claims 25-30 as follows:

1. (Currently Amended) A method ~~for receiving a multi-carrier signal, the method comprising the steps of:~~

defining an energy of pilot carriers in a multi-carrier said signal in respect of an estimated guard interval position of said signal, and

based on said energy, selecting a position for a time domain to frequency domain transform window of said signal, wherein the selecting is based on an energy ratio between energy sample inside the estimated guard interval position and energy sample outside the estimated guard interval position.

2. (Currently Amended) A method according to claim 1, wherein the step of defining further comprises:

defining the energy of said pilot carriers in said signal in respect of the estimated guard interval position of said signal for predetermined amount of trial positions for said time domain to frequency domain transform window,

and further the step of selecting further comprises:

selecting said position from said trial positions.

3. (Currently Amended) A method according to claim 1, wherein the selection step comprises: selecting said position for the time domain to the frequency domain transform window of said signal in such a way that the smallest amount of inter symbol interference is formed.

4. (Currently Amended) A method according to claim 1, wherein said step of selecting is based on energy outside the estimated guard interval position having the minimum.

5. (Currently Amended) A method according to claim 1, wherein said step of selecting is based on energy inside the estimated guard interval position having the maximum.

6. (Cancelled).

7. (Currently Amended) A method according to claim 1, further comprising, ~~before the step of defining, the step of:~~

performing a coarse timing for said signal for an initial position for said time domain to frequency domain transformation window.

8. (Currently Amended) A method according to claim 1, wherein the ~~step of~~ defining is performed according to a predetermined scheme for determining a predetermined amount of trial positions for said time domain to frequency domain transform window, and

based on said energy, selecting the time domain to frequency domain transformation window from said trial positions in such a way that the smallest amount of inter symbol interference is formed.

9. (Currently Amended) A method according to claim 1, further comprising ~~the step of:~~

performing a fine timing with the selected time domain to frequency domain transformation window for fine tuning said selected time domain to frequency domain transformation window.

10. (Currently Amended) A method according to claim 1, further comprising, before the step of defining, the steps of:

performing a first time interpolation for said signal,

further, before the step of selecting,

taking a certain amount of trial positions for said time domain to frequency domain transformation window in accordance with a predefined scheme,

and further,

based on said energy, selecting the time domain to frequency domain transformation window position of said trial positions with the smallest amount of interference,

initialising initializing a second time interpolation with the selected position, and

fine tuning said time domain to frequency domain transformation window.

11. (Original) A method according to claim 10, wherein said first time interpolation comprises a linear time interpolation.

12. (Previously Presented) A method according to claim 1, wherein said time domain to frequency domain transform window of said signal comprises FFT-window.

13. (Previously Presented) A method according to claim 1, wherein said multi-carrier signal comprises a mobile IP over DVB-T signal.

14. (Previously Presented) A method according to claim 1, wherein said pilot carriers are scattered pilot carriers.

15. (Currently Amended) Data processing system An apparatus comprising means for carrying out a processor configured to perform the method according to claim 1.

16. (Cancelled)

17. (Cancelled)

18. (Previously Presented) A computer readable medium comprising program code adapted to carry out the method of claim 1 when run on a computer.

19. (Cancelled)

20. (Currently Amended) A receiver ~~for receiving a multi-carrier signal, the receiver comprising:~~

~~means for defining a defining unit configured to define an energy of pilot carriers in said a multi-carrier signal in respect of an estimated guard interval position of said signal, and~~

~~based on said energy, means for selecting a selection unit configured to select a position for a time domain to frequency domain transform window of said signal based on said defined energy, wherein the selection unit is further configured to select on a basis of an energy ratio between energy sample inside the estimated guard interval position and energy sample outside the estimated guard interval position.~~

21. (Currently Amended) A receiver according to claim 20, wherein said ~~means for defining unit~~ comprises a fine timing unit.

22. (Currently Amended) A receiver according to claim 20, wherein said ~~means for selecting selection unit~~ comprises a fallback unit for tracking predetermined trial positions for time domain to frequency domain transform window and a control unit for selecting the position from said trial positions.

23. (Cancelled)

24. (Previously Presented) A method for receiving an OFDM radio signal, comprising the steps of:

- (a) receiving said signal,
- (b) selecting an initial position for a FFT-window of said signal in accordance with a coarse timing,
- (c) performing FFT to said initial position to obtain a first output,
- (d) extracting scattered pilots from said first output to obtain a second output,
- (e) performing a linear time interpolation for said second output,
- (f) performing IFFT for the time interpolated scattered pilots for obtaining a channel impulse response (CIR),
- (g) estimating energy based on the CIR,
- (h) keeping track on used trial positions with said energy,
- (i) changing FFT-window position in accordance with a predefined scheme until predefined amount of trial positions for said FFT-window have been applied,
- (j) selecting a FFT-window from said trial positions,
- (k) performing a time interpolation for the scattered pilots based on the selected FFT-window,
- (l) performing IFFT for the time interpolated scattered pilots, and
- (m) fine tuning the selected FFT-window in accordance with the IFFT.

25. (New) A method, comprising:

defining an energy of pilot carriers in a multi-carrier signal in respect of an estimated guard interval position of said signal, and

based on said energy, selecting a position for a time domain to frequency domain transform window of said signal, wherein said selecting is based on energy outside the estimated guard interval position having the minimum.

26. (New) A method, comprising:

defining an energy of pilot carriers in a multi-carrier signal in respect of an estimated guard interval position of said signal,

based on said energy, selecting a position for a time domain to frequency domain transform window of said signal wherein said selecting is based on energy inside the estimated guard interval position having the maximum.

27. (New) A receiver, comprising:

a defining unit configured to define an energy of pilot carriers in a multi-carrier signal in respect of an estimated guard interval position of said signal, and

a selection unit configured to select a position for a time domain to frequency domain transform window of said signal based on said defined energy, wherein said selection unit is configured to perform the selecting on a basis of energy outside the estimated guard interval position having the minimum.

28. (New) A receiver, comprising:

a defining unit configured to define an energy of pilot carriers in a multi-carrier signal in respect of an estimated guard interval position of said signal, and

a selection unit configured to select a position for a time domain to frequency domain transform window of said signal based on said defined energy, wherein said selection unit is configured to perform the selecting on a basis of energy inside the estimated guard interval position having the maximum.

29. (New) A computer readable medium comprising program code adapted to carry out the method of claim 25 when run on a computer.

30. (New) A computer readable medium comprising program code adapted to carry out the method of claim 26 when run on a computer.